I claim:

1. A housing for a brake booster (100) having a first shell (10) joined to a second shell (30) by deforming a first peripheral surface on the first shell (10) with respect to a second peripheral surface (204) on the second shell (30) toward an axial center of said second shell (30) to axially compress a bead (27) on a diaphragm (28) located between the first (10) and second (30) shells and seal an interior of the housing from the surrounding environment, said housing being characterized by said first peripheral surface having a flange (24) that extends from a shoulder (20) to an opened end (18) thereof that receives an opened end (202) of said second shell (30), said flange (24) having a plurality of axial slots (36,36',•••36^n) that axially extend from said opened end (18) toward said shoulder (20) and engage a plurality of radial slots (38,38',•••38^n) to create an "⌋ ⌊" shaped openings adjacent a radial plane (11) to define a first plurality of arcuate projections (40,40',•••40^n) separated from a second plurality of arcuate projections (42,42',•••42^n), said second plurality of arcuate projections (42,42',•••42^n) each having a first and second radial tabs (44,46) thereon, said deforming of said first peripheral surface occurring in said flange (26) by bending said first plurality of arcuate projections (40,40',•••40^n) toward the axis of said second shell to engage an edge (206) of said second peripheral surface (204) and position said second peripheral surface (204) adjacent said radial plane (11) and under said flange (26).

2. The housing as recited in claim 1 wherein said radial tabs (44) on said second plurality of arcuate projections (42,42',•••42^n) are bent toward said axial center of said second shell (30) to define a secondary holding surface (43,45) should said the engagement of the first plurality of arcuate projections (40,40',•••40^n) with the edge (206) of said second peripheral surface (204) allow said opened end (202) to move away from said shoulder (20).

3. A method of joining a first shell (10) to a second shell (30) to define a housing for a brake booster (100) comprising the steps of:

selecting the first shell (10) from a supply, said first shell (10) having a first cylindrical body (14) with a closed end (16) and a first peripheral surface with a shoulder (20) adjacent an opened end (18) to define a flange (24), said flange (24) having a plurality of axial slots (36,36',•••36^n) that axially extend from said opened end (18) toward said shoulder (20) and engage a plurality of radial slots (38,38',•••38^n) to create "⌋ ⌊" shaped openings adjacent a radial plane (11) and define a first plurality of arcuate projections (40,40',•••40^n) that are separated from a second plurality of arcuate projections (42,42',•••42^n), said second plurality of arcuate projections (42,42',•••42^n) each having a first and second radial tabs (44,46) thereon;

selecting a second shell (30) from a supply, said second shell (30) having a cylindrical body (200) with a second peripheral surface (204) on an opened end (202);

locating a bead (27) of a diaphragm (28) adjacent said shoulder (20) to define a chamber (32) within said first shell (10);

inserting said second shell (30) into said first shell (10) such that said second peripheral surface (204) engages said flange (26);

moving said second shell (30) toward said first shell (10) to compress said bead (27) between said opened end (202) and said shoulder (20) until said edge (206) on said second peripheral surface (204) is aligned with said radial plane (11) and said second peripheral surface (204) is under said flange (26); and

applying an axial force at to bend said first plurality of arcuate projections (40,40',•••40^n) toward said axial center of said second shell (30) to bring said first plurality of arcuate projections (40,40',•••40^n) into engagement with said edge (206) of said second peripheral surface (204) such that said chamber (32) is sealed from the surrounding environment and first shell (10) is joined with said second shell (30).

4. The method as recited in claim 3 further including the step of applying a axial force to bend said first plurality of arcuate projections (40,40',•••40^n) includes a radial force to bend said first and second tabs (44,46) on each of said second plurality of arcuate projections (42,42',•••42^n) toward said axial center of said second shell (30) to define a stop (43,45) to limit the movement of said opened end (202) away from said radial plane (11) should the engagement between said first plurality of arcuate projections (42,42',•••42^n) and said edge (206) allow said opened end (202) move away from said shoulder (20) and thereby maintain a sealed relationship between said first shell (10) and said second shell (30).

5. The method as recited in claim 4 wherein said first (10) and second (30) shells are coated with a material to prevent oxidization and said deformation of said first plurality of arcuate projections (40,40',•••40^n) toward said axial center of said second shell (30) and into engagement with said edge (206) on said second peripheral surface (204) defines an angle of between 14 and 20 degrees with said flange (26) such that the elastomeric properties of said coating are not exceeded and the surface of the flange (26) is not exposed to environmental conditions that could induce oxidization.

6. The method as recited in claim 5 wherein said deformation of said first (44) and second (46) radial tabs on said second plurality of arcuate projections (42,42',•••42^n) toward said axial center of said second shell (30) defines an angle of approximately 45 degrees with respect to a tangent of the said flange (26).

7. The method as recited in claim 6 wherein the engagement said first plurality of arcuate projections (40,40',•••40^n) with said edge (206) on said second peripheral surface (204) creates a gap (X) between said edge (206) and said first (44) and second (46) tabs on said second plurality of arcuate projections (42,42',•••42^n), said gap being an indication of a desired sealing relationship between said first shell (10) and said second shell (30).